AMENDMENTS TO THE CLAIMS:

Claims 1-32 (canceled).

33. (New) A hydraulic press apparatus comprising:

a lower plate;

an upper plate adapted to be driven toward said lower plate via operation of a motion a position control device;

a hollow cylinder under said lower plate, said hollow cylinder having an upper edge tightly engaged with a lower surface of said lower plate;

a guide column connected to said upper plate, said guide column having a lower end portion that defines a rod for a first piston adapted to slide within said hollow cylinder, and said guide column defining an inner cylindrical cavity that extends through said first piston, with said inner cylindrical cavity being filled with hydraulic fluid;

a hole extending through said lower plate, said hole being adapted to slidably accommodate said guide column;

an aperture in a side surface of said hollow cylinder, said aperture allowing a volume defined between said lower plate and said first piston to communicate with a hydraulic device that is adapted to apply a hydraulic pressure within said volume when said first piston is in a lower position;

a plunger piston adapted to slide within said inner cylindrical cavity, said plunger piston including an upper cylindrical portion that has a diameter such that said upper cylindrical portion is capable of plugging said inner cylindrical cavity, said plunger piston also including a lower portion that has a diameter smaller than said diameter of said upper cylindrical portion so as to prevent said lower portion from contacting walls defining said inner cylindrical cavity; and

a through-bore allowing said inner cylindrical cavity to communicate with said volume when said upper cylindrical portion is at a level that is beneath a level of said through-bore.

34. (New) The hydraulic press apparatus according to claim 33, wherein

a length of said upper cylindrical portion and a length of said lower portion are such that,

(i) when said first piston is in the lower position, said upper cylindrical portion is positioned so as to plug said through-bore, and

(ii) when said first piston is in a position corresponding to a position of greatest separation between said upper plate and said lower plate, said upper cylindrical portion is positioned so that at least a portion of said through-bore is not plugged by said upper cylindrical portion.

35. (New) The hydraulic press apparatus according to claim 34, wherein

said length of said upper cylindrical portion and said length of said lower portion are also such that when said first piston is in the lower position, said lower portion exerts a force against a bottom wall of said hollow cylinder.

36. (New) The hydraulic press apparatus according to claim 35, further comprising:

a resilient member on said bottom wall of said hollow cylinder and positioned between said bottom wall and said lower portion such that, when said first piston is in the lower position said lower portion exerts a force against said bottom wall of said hollow cylinder via said resilient member.

37. (New) The hydraulic press apparatus according to claim 36, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

38. (New) The hydraulic press apparatus according to claim 35, wherein said plunger piston further includes a first frusto-conical portion interconnecting said upper cylindrical portion and said lower portion, and further comprising:

a first frusto-conical crown-like ring within said guide column, said first frusto-conical crown-like ring positioned at a level that is beneath said level of said through-bore and adapted to engage said first frusto-conical portion so as to prevent said plunger piston from being displaced downwardly beyond said first frusto-conical crown-like ring,

wherein a height of said upper cylindrical portion is not more than a difference in height between an upper edge of said through-bore and said first frusto-conical crown-like ring, such that said upper cylindrical portion is not able to plug said through-bore when said plunger piston is located above and in contact with said first frusto-conical crown-like ring.

39. (New) The hydraulic press apparatus according to claim 38, wherein said plunger piston further includes a second frusto-conical portion at an upper end of said upper cylindrical portion, and further comprising:

a second frusto-conical crown-like ring within said guide column, said second frusto-conical crown-like ring positioned at a level that is above said level of said through-bore and adapted to engage said second frusto-conical portion when said first piston is in the lower position.

40. (New) The hydraulic press apparatus according to claim 39, further comprising:

a resilient member on said bottom wall of said hollow cylinder and positioned between said bottom wall and said lower portion such that, when said first piston is in the lower position said lower portion exerts a force against said bottom wall of said hollow cylinder via said resilient member.

41. (New) The hydraulic press apparatus according to claim 40, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

42. (New) The hydraulic press apparatus according to claim 39, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

43. (New) The hydraulic press apparatus according to claim 38, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

44. (New) The hydraulic press apparatus according to claim 38, further comprising:

a resilient member on said bottom wall of said hollow cylinder and positioned between said bottom wall and said lower portion such that, when said first piston is in the lower position said lower portion exerts a force against said bottom wall of said hollow cylinder via said resilient member.

45. (New) The hydraulic press apparatus according to claim 44, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

46. (New) The hydraulic press apparatus according to claim 35, wherein said plunger piston further includes a frusto-conical portion at an upper end of said upper cylindrical portion, and further comprising:

a frusto-conical crown-like ring within said guide column, said frusto-conical crown-like ring positioned at a level that is above said level of said through-bore and adapted to engage said frusto-conical portion when said first piston is in the lower position.

47. (New) The hydraulic press apparatus according to claim 46, further comprising:

a resilient member on said bottom wall of said hollow cylinder and positioned between said bottom wall and said lower portion such that, when said first piston is in the lower position said lower portion exerts a force against said bottom wall of said hollow cylinder via said resilient member.

48. (New) The hydraulic press apparatus according to claim 47, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

49. (New) The hydraulic press apparatus according to claim 46, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

50. (New) The hydraulic press apparatus according to claim 35, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

51. (New) The hydraulic press apparatus according to claim 34, wherein said plunger piston further includes a first frusto-conical portion interconnecting said upper cylindrical portion and said lower portion, and further comprising:

a first frusto-conical crown-like ring within said guide column, said first frusto-conical crown-like ring positioned at a level that is beneath said level of said through-bore and adapted to engage said first frusto-conical portion so as to prevent said plunger piston from being displaced downwardly beyond said first frusto-conical crown-like ring,

wherein a height of said upper cylindrical portion is not more than a difference in height between an upper edge of said through-bore and said first frusto-conical crown-like ring, such that said upper cylindrical portion is not able to plug said through-bore when said plunger piston is located above and in contact with said first frusto-conical crown-like ring.

52. (New) The hydraulic press apparatus according to claim 51, wherein said plunger piston further includes a second frusto-conical portion at an upper end of said upper cylindrical portion, and further comprising:

a second frusto-conical crown-like ring within said guide column, said second frusto-conical crown-like ring positioned at a level that is above said level of said through-bore and adapted to engage said second frusto-conical portion when said first piston is in the lower position.

53. (New) The hydraulic press apparatus according to claim 52, further comprising:

a resilient member on a bottom wall of said hollow cylinder and positioned between said bottom wall and said lower portion such that, when said first piston is in the lower position said lower portion exerts a force against said bottom wall of said hollow cylinder via said resilient member.

54. (New) The hydraulic press apparatus according to claim 53, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said

volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

55. (New) The hydraulic press apparatus according to claim 52, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

56. (New) The hydraulic press apparatus according to claim 51, further comprising:

a resilient member on a bottom wall of said hollow cylinder and positioned between said bottom wall and said lower portion such that, when said first piston is in the lower position said lower portion exerts a force against said bottom wall of said hollow cylinder via said resilient member.

57. (New) The hydraulic press apparatus according to claim 56, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

58. (New) The hydraulic press apparatus according to claim 51, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

59. (New) The hydraulic press apparatus according to claim 34, wherein said plunger piston further includes a frusto-conical portion at an upper end of said upper cylindrical portion, and further comprising:

a frusto-conical crown-like ring within said guide column, said frusto-conical crown-like ring positioned at a level that is above said level of said through-bore and adapted to engage said frusto-conical portion when said first piston is in the lower position.

60. (New) The hydraulic press apparatus according to claim 59, further comprising:

a resilient member on a bottom wall of said hollow cylinder and positioned between said bottom wall and said lower portion such that, when said first piston is in the lower position said lower portion exerts a force against said bottom wall of said hollow cylinder via said resilient member.

61. (New) The hydraulic press apparatus according to claim 60, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

62. (New) The hydraulic press apparatus according to claim 59, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

63. (New) The hydraulic press apparatus according to claim 34, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said

volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.

64. (New) The hydraulic press apparatus according to claim 33, further comprising:

a cylindrical member in said guide column, said cylindrical member defining an interior of said guide column into said inner cylindrical cavity and a volume above said cylindrical member, with said volume above said cylindrical member being for containing a gas that is to be pressurized via an external conduit.